

SLOVENSKI STANDARD

SIST HD 60364-7-704:2007

01-oktober-2007

Nadomešča:

SIST HD 384.7.704 S1:2001

SIST IEC 60364-7-704:2006

Nizkonapetostne električne inštalacije - 7-704. del: Zahteve za posebne inštalacije ali lokacije - Gradbišča (IEC 60364-7-704:2005, spremenjen)

Low-voltage electrical installations -- Part 7-704: Requirements for special installations or locations - Construction and demolition site installations

Errichten von Niederspannungsanlagen - Teil 7-704: Anforderungen für Betriebsstätten, Räume und Anlagen besonderer Art - Baustellen

Installations électriques basse tension -- Partie 7-704: Exigences pour les installations ou emplacements spéciaux - Installations de chantiers de construction et de démolition

Ta slovenski standard je istoveten z: HD 60364-7-704:2007

ICS:

91.140.50	Sistemi za oskrbo z elektriko	Electricity supply systems
91.200	Gradbena tehnologija	Construction technology

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HARMONIZATION DOCUMENT
DOCUMENT D'HARMONISATION
HARMONISIERUNGSDOKUMENT

HD 60364-7-704

January 2007

ICS 29.020; 91.140.50

Supersedes HD 384.7.704 S1:2000
Incorporates Corrigendum April 2008

English version

**Low-voltage electrical installations -
Part 7-704: Requirements for special installations or locations -
Construction and demolition site installations
(IEC 60364-7-704:2005, modified)**

Installations électriques basse tension -
Partie 7-704: Exigences pour les
installations ou emplacements spéciaux -
Installations de chantiers de construction
et de démolition
(CEI 60364-7-704:2005, modifiée)

Errichten von Niederspannungsanlagen -
Teil 7-704: Anforderungen
für Betriebsstätten, Räume
und Anlagen besonderer Art -
Baustellen
(IEC 60364-7-704:2005, modifiziert)

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This Harmonization Document was approved by CENELEC on 2006-02-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this Harmonization Document at national level.

Up-to-date lists and bibliographical references concerning such national implementations may be obtained on application to the Central Secretariat or to any CENELEC member.

This Harmonization Document exists in three official versions (English, French, German).

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

FOREWORD

The text of document 64/1477/FDIS, future edition 2 of IEC 60364-7-704, prepared by IEC TC 64, Electrical installations and protection against electric shock, was submitted to the IEC-CENELEC parallel vote.

A draft amendment, prepared by SC 64A, Protection against electric shock, of Technical Committee CENELEC TC 64, Electrical installations and protection against electric shock, was submitted to the formal vote.

The combined texts were approved by CENELEC as HD 60364-7-704 on 2006-02-01.

This Harmonization Document supersedes HD 384.7.704 S1:2000.

The following dates were fixed:

- latest date by which the existence of the HD has to be announced at national level (doa) 2006-08-01
- latest date by which the HD has to be implemented at national level by publication of a harmonized national standard or by endorsement (dop) 2007-08-01
- latest date by which the national standards conflicting with the HD have to be withdrawn (dow) 2009-02-01

Annexes ZA and ZB have been added by CENELEC.

In this standard, the common modifications to the International Standard are indicated by a vertical line in the left margin of the text.

The contents of the corrigendum of April 2008 have been included in this copy.

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INTRODUCTION

The requirements of this part of HD 60364 supplement, modify or replace certain of the general requirements of the other parts of HD 60364.

The clause numbering of part 704 follows the pattern and corresponding references of HD 60364. The numbers following the particular number of part 704 are those of the corresponding parts, or clauses of HD 60364.

The absence of reference to a part, a clause or a subclause means that the corresponding general requirements are applicable.

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704.1 Scope

The following requirements are added:

704.1.1 The special requirements of this part apply to temporary installations for construction and demolition sites during the period of the construction or demolition work, including for example the following:

- construction work of new buildings;
- repair, alteration, extension, demolition of existing buildings or parts of existing buildings;
- engineering works;
- earthworks;
- work of similar nature.

The requirements apply to fixed or moveable installations.

The rules do not apply to

- installations covered by the IEC 60621 series where equipment of a similar nature to that used in surface mining applications is involved;
- installations in administrative locations of construction sites (offices, cloakrooms, meeting rooms, canteens, restaurants, dormitories, toilets, etc.) where the general rules of Parts 1 to 6 of HD 60364 apply.

NOTE For special situations, more severe requirements apply, e.g. HD 60364-7-706 for conductive locations with restricted movement.

704.1.2 The requirements of this part are applicable to

- fixed installations limited to the assembly comprising the main controlgear and the main protective device;

NOTE The place where such an assembly is located is considered to be the interface between the supply system and the construction site installations.

- installations on the load side of the above assembly comprising mobile or transportable electrical equipment as part of the movable installations.

704.2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendment) applies.

HD 22.4, *Cables of rated voltages up to and including 450/750 V and having cross-linked insulation – Part 4: Cords and flexible cables*

EN 60309-1, *Plugs, socket-outlets and couplers for industrial purposes – Part 1: General requirements*

EN 60309-2, *Plugs, socket-outlets and couplers for industrial purposes – Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories*

EN 60439-4, *Low-voltage switchgear and controlgear assemblies – Part 4: Particular requirements for assemblies for construction sites (ACS)*

704.30 Assessment of general characteristics

704.313 Supplies

The following note is added.

NOTE A single construction site may be served by several sources of supply, including generating sets; see HD 384.5.551.

704.4.41 Protection for safety – Protection against electric shock

704.410.3 General requirements

704.410.3.5 The measures of protection by means of obstacles and by placing out of reach are not permitted.

New subclause:

704.410.3.10 Circuits supplying socket-outlets with rated current up to and including 32 A and other circuits supplying hand-held electrical equipment with rated current up to and including 32A shall be protected by

- residual current devices having a rated residual operating current not exceeding 30 mA (415.1), or
- protective measure: extra-low-voltage provided by SELV and PELV (414), or
- protective measure: electrical separation (413), each socket-outlet and hand-held electrical equipment being supplied by an individual isolating transformer or by separate windings of an isolating transformer.

704.411 Protective measure: automatic disconnection of supply

704.411.3.2 Automatic disconnection in case of a fault

704.411.3.2.1

Additional paragraph:

For circuits supplying socket-outlets with a rated current exceeding 32A, residual current operating devices having a rated residual operating current not exceeding 500 mA shall be used as disconnection devices.

704.411.6.3.1

Additional paragraph:

In the case of portable generating sets, insulation monitoring devices may be omitted.

704.413 Protective measure: electrical separation

The following note is added:

NOTE If electrical separation is used, special attention should be paid to the requirements of Subclause 413.3.3.

704.414 Protective measure: extra-low-voltage provided by SELV and PELV

704.414.4 Requirements for SELV and PELV circuits

The following requirement is added:

704.414.4.5 The requirement for basic protection (protection against direct contact) in accordance with 414.4.5 shall be provided, irrespective of the nominal voltage.

704.5.51 Selection and erection of electrical equipment – Common rules

The following requirement is added:

704.511.1

Additional paragraphs:

All assemblies on construction and demolition sites (ACS) for the distribution of electricity shall be in compliance with the requirements of EN 60439-4.

Plugs and socket-outlets with a rated current exceeding 16 A shall comply with the requirements of EN 60309-2.

NOTE Socket-outlets with a rated current not exceeding 16 A may be used according to relevant national standards.

704.5.52 Selection and erection of electrical equipment – Wiring systems

704.522.8.9

Additional paragraph:

Flexible cables shall be of the H07 RN-F type or equivalent, cable resistant to abrasion and to water.

New subclause:

704.522.8.10 To avoid damage, cables should not be run across site roads or walkways.

Where this is necessary, special protection against mechanical damage and contact with construction plant shall be provided.

Particular attention shall be given to the protection of surface run and overhead cables against mechanical damage given the environment and activities at the construction site.

704.5.53 Selection and erection of electrical equipment – Switchgear and controlgear

704.536.2.2 Devices for isolation

The following requirements are added:

Each assembly for construction sites (ACS) shall incorporate devices for switching and isolating the incoming supply.

Devices for isolating the incoming supply shall be suitable for securing in the off position (see 536.2.1.3) (for example, a padlock or location inside a lockable enclosure).

Current-using equipment shall be supplied by ACSs, each ACS comprising:

- overcurrent protective devices;
- devices affording protection against indirect contact;
- socket-outlets, if required.

Safety and standby supplies shall be connected by means of devices arranged to prevent interconnection of the different supplies.

704.556 Safety services

The following note is added:

NOTE Site conditions may require the provision of safety services, e.g. escape lighting.

Annex ZA (normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions.

NOTE If it affects harmonization, it forms part of the Harmonization Document.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

(Sub)clause Special national condition

Belgium

704.411.3 When fault protection (protection against indirect contact) is assured by automatic disconnection of supply, according to Clause 411.3, the conventional touch voltage limit U_L shall be limited to 25 V a.c. r.m.s. or 60 V ripple free d.c.

Finland

704.410.3.10 Circuits supplying socket-outlets with rated current up to and including 32 A that supply other ACSs are exempted provided that constructional provisions or warning signs for these socket-outlet have been provided to avoid misuse.

Germany

704.511.1 Delete the note.

Hungary

704.410.3.10 If the environmental conditions require it, then residual current devices with rated residual operating current of 100 mA can be used.

Ireland

704.410.3 Protection by reduced low-voltage system in which the highest voltage shall not exceed 110 V a.c. between phases and 55 V a.c. to earth (single-phase) or 63,5 V a.c. to earth (three phases) is considered as a particular application of the protection measure by automatic disconnection of supply in the TN system according to Clause 411.4.

In this case, socket-outlets do not need the additional protective measures specified in 704.410.3.10, first indent.

704.410.3.10 Electrical separation is not permitted in site installations.

705.5.53 Switchgear enclosures must be made of non-conducting material.

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